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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,515	07/09/2001	Roger Collins	05545P002	7416

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EXAMINER

CHEN, WENPENG

ART UNIT	PAPER NUMBER
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2624

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12/18/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/902,515	Applicant(s) COLLINS, ROGER	
	Examiner Wenpeng Chen	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 54-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 54-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

I. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 10/30/2009 has been entered.

Claim Objections

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Two claims are numbered as "claim 64". The second claim 64, claim 65, and claim 66 are renumbered as claim 65, claim 66, and claim 67, respectively.

According, in line 1, renumbered claim 66, change [claim 54,] to - claim 65, -.

Claim Rejections - 35 USC § 101

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3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO “Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility” (Official Gazette notice of 22 November 2005), Annex IV, reads as follows (see also MPEP 2106):

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.

... a signal does not fall within one of the four statutory classes of Sec. 101.

... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

4. Renumbered Claim 67 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Renumbered Claim 67 is drawn to functional descriptive material recorded on a computer readable storage medium. Normally, the claim would be statutory. However, the specification, at paragraph [0072] defines or exemplifies the claimed computer readable medium as encompassing statutory media such as a “ROM”, “hard drive”, “optical drive”, etc, as well as **non-statutory** subject matter such as a "carrier wave" or "other propagation medium".

“A transitory, propagating signal ... is not a “process, machine, manufacture, or composition of matter.” Those four categories define the explicit scope and reach of subject

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matter patentable under 35 U.S.C. § 101; thus, such a signal cannot be patentable subject matter.” (*In re Nuijten*, 84 USPQ2d 1495 (Fed. Cir. 2007)).

Because the full scope of the claim as properly read in light of the disclosure appears to encompass non-statutory subject matter (i.e., because the specification defines/exemplifies a computer readable medium as a non-statutory signal, carrier waver, etc.) the claim as a whole is non-statutory. The examiner suggests amending the claim to include the disclosed tangible computer readable storage media, while at the same time excluding the intangible transitory media such as signals, carrier waves, etc. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 112

5. Claims 54-64 and renumbered Claims 65-67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for the following reasons.

There are insufficient antecedent bases for the following limitations.

-- Claim 54, renumbered Claim 65, and renumbered Claim 67 recite the limitation "a said messaging service" in lines 4, 4, and 4, respectively. Whether the limitation refers to antecedent term or not is not clear.

Claim Rejections - 35 USC § 103

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6. Claims 54, 59, 60, 63, 64, and renumbered 65-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carr (US patent 5,293,379 cited previously) in view of Bates et al. (US 7,035,902).

a. Carr teaches, for Claim 54, a method of compressing messages transmitted between a server and a data processing device, the server providing a messaging service to a user, the method comprising:

--- receiving data at an interface from said messaging service; (column 4, lines 33-51)

--- identifying at the interface whether the data is of a first message type or a second, different, message type, the first message type being an electronic mail (email) message corresponding to a user mailbox; (column 6, line 64 to column 7, line 46; Figs. 4-6; The data are identified to include address information which are address book data in the collected header field and user data which are email message. An email message is inherently corresponding to a user mailbox by definition.)

--- responsive to identification of the data being of the first message type, coding the email message: (column 6, line 64 to column 7, line 46; Figs. 5-6; The user data are coded with a user data dictionary that has a first set of code words.)

-- transmitting said compressed email message to the data processing device. (column 4, lines 19-32)

However, Carr does not teach the features related to (1) "wireless" or (2) "identifying whether the email message comprises data corresponding to an email message previously stored"

Bates teaches an email processing system and method comprising:

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-- transmitting messages between a server and a wireless data processing device; (Fig. 1; column 3, line 60 to column 4, line 10; A terminal can be a computer or a wireless device. In this patent, a wireless device is equivalent to a computer as a terminal. All the features associated with a terminal computer are also associated with a wireless device.)

--- responsive to identification of the data being of an email message (the first message type):

-- identifying whether the email message comprises data corresponding to an email message previously stored on a data processing device associated with the user mailbox so as to apply a first encoding procedure or a second, different, encoding procedure, the first encoding procedure comprising: (Fig. 3; column 4, lines 44-54; column 5, lines 20-42; The first encoding procedure uses pointers.)

- identifying a block of data within a message-body portion of the email message which is found in the previous email message; (Fig. 3; column 4, lines 44-54; column 5, lines 20-42)

- generating a pointer identifying said block of data in said previous email message; (Fig. 3; column 4, lines 44-54; column 5, lines 20-42); and

- replacing said block of data in the email message with said pointer, whereby to generate a compressed email message; (Fig. 3; column 4, lines 44-54; column 5, lines 20-42) and

-- transmitting said email message to the wireless data processing device, (Fig. 3; column 4, lines 44-54; column 5, lines 20-42)

-- wherein said pointer identifies said block of data at a location in memory of the wireless data processing device. (Fig. 3; column 4, lines 44-54; column 5, lines 20-42)

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It is desirable to broaden email applications. One way to achieve it is to transmit and receive emails under various device connections including using wireless devices. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply the teaching of Bates to communicate Carr's compressed email message under various device connections including using wireless devices because the combination broadens email applications.

It is also desirable to use memory and transmission bandwidth efficiently. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply the teaching of Bates to encode the portion of the email message which is found in the previous email message as a pointer to significantly reduce data amount of Carr's message data to be transmitted and saved because the combination uses memory and transmission bandwidth efficiently in email process.

The combination thus teaches all features recited in Claim 54.

Bates further teaches for Claim 59, comprising applying the second encoding procedure and the first encoding procedure to the email message. (Fig. 3; column 4, lines 44-54; column 5, lines 20-42; The first encoding procedure uses pointers. The second encoding procedure encodes portion of data without using pointers.)

For Claim 63, Carr teaches that data items to a message of the first type in the body of message and to a message of the second type in the header. (column 6, line 64 to column 7, line 46; Figs. 4-6) Bates teaches that data items representing address are common to a message of the first type in the body of message and to a message of the second type in the header. (Fig. 4) The combination teaches that the address data are encoded differently dependent on the type of message.

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For claim 64, wherein said data items include an email address in a header portion of an email message and an email address forming a field of an address book message. (Bates teaches that the email address in the address field of a previously received email forming a field of an address book message and is coded with a pointer.)

For Claim 60, Carr teaches that, in which, responsive to identification of the received data being of the second message type, the method comprises identifying whether the received data comprises an address book message so as to apply a third encoding procedure thereto, the third encoding procedure comprising selectively encoding specified fields of the address book message, whereby to compress the address book message, the specified fields being a subset of the fields contained within the received data. (column 6, line 64 to column 7, line 46; Figs. 5-6; The header fields including the address book data is coded with header dictionary that has a second set of code words.) The combination of Carr and Bates as discussed above thus teaches transmitting the compressed address book message to the wireless data processing device...

b. Carr teaches, for renumbered Claim 65 a server system (Figs. 1 and 3) for compressing messages transmitted to a data processing device, the server system providing a messaging service to a user, the server system comprising:

--- an interface configured to receive data from said messaging service; (column 4, lines 33-51)

--- a compression module configured to identify whether the data is of a first message type or a second, different, message type, the first message type being an electronic mail (email) message corresponding to a user mailbox, (column 6, line 64 to column 7, line 46; Figs. 4-6; The

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data are identified to include address information which are address book data in the collected header field and user data which are email message. An email message is inherently corresponding to a user mailbox by definition.)

--- responsive to identification of the data being of the first message type, coding the email message: (column 6, line 64 to column 7, line 46; Figs. 5-6; The user data are coded with a user data dictionary that has a first set of code words.)

-- transmitting said compressed email message to the data processing device. (column 4, lines 19-32)

However, Carr does not teach the features related to (1) "wireless" or (2) "identifying whether the email message comprises data corresponding to an email message previously stored"

Bates teaches an email processing system and method comprising:

-- transmitting messages between a server and a wireless data processing device; (Fig. 1; column 3, line 60 to column 4, line 10; A terminal can be a computer or a wireless device. In this patent, a wireless device is equivalent to a computer as a terminal. All the features associated with a terminal computer are also associated with a wireless device.)

--- wherein, responsive to identification of the data being of the first message type, (the first message type) the compression module is configured to:

-- identify whether the email message comprises data corresponding to an email message previously stored on a wireless data processing device associated with the user mailbox so as to apply a first encoding procedure or a second, different, encoding procedure, the first encoding procedure comprising: (Fig. 3; column 4, lines 44-54; column 5, lines 20-42; The first encoding procedure uses pointers.)

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- identifying a block of data within a message-body portion of the email message which is found in the previous email message; (Fig. 3; column 4, lines 44-54; column 5, lines 20-42)
- generating a pointer identifying said block of data in said previous email message; and
- replacing said block of data in the email message with said pointer, whereby to generate a compressed email message; (Fig. 3; column 4, lines 44-54; column 5, lines 20-42) and
- transmit said compressed email message to the wireless data processing device, (Fig. 3; column 4, lines 44-54; column 5, lines 20-42)
- wherein said pointer identifies said block of data at a location in memory of the wireless data processing device. (Fig. 3; column 4, lines 44-54; column 5, lines 20-42)

It is desirable to broaden email applications. One way to achieve it is to transmit and receive emails under various device connections including using wireless devices. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply the teaching of Bates to communicate Carr's compressed email message under various device connections including using wireless devices because the combination broadens email applications.

It is also desirable to use memory and transmission bandwidth efficiently. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to apply the teaching of Bates to encode the portion of the email message which is found in the previous email message as a pointer to significantly reduce data amount of Carr's message data to be transmitted and saved because the combination uses memory and transmission bandwidth efficiently in email process.

The combination thus teaches all features recited in renumbered Claim 65.

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For renumbered Claim 66, Carr teaches that data items to a message of the first type in the body of message and to a message of the second type in the header. (column 6, line 64 to column 7, line 46; Figs. 4-6) Bates teaches that data items representing address are common to a message of the first type in the body of message and to a message of the second type in the header. (Fig. 4) The combination teaches that the address data are encoded differently dependent on the type of message.

c. The renumbered Claim 67 recites a computer readable storage medium encoded with computer program instructions corresponding to the method of Claim 54. Because Bates teaches a computer readable storage medium encoded with computer program instructions for carrying out a corresponding method (column 4, lines 11-37), the combination of Carr and Bates also teaches the renumbered Claim 67.

7. Claims 55-58 and 61-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Carr and Bates as applied to Claims 54 and 60, and further in view of Unger et al. (US patent 5,991,713 cited previously.)

The combination of Carr and Bates teaches the parental Claims 54 and 60. Carr further teaches that other string compression algorithms are also applicable in the method explained with Figs. 3-9, namely compressing header and data with different dictionaries. However, the combination of Carr and Bates does not teach explicitly that the code words are based on the frequency associated to the above claims.

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Unger teaches a method for compressing a message. In the method, different types of data are coded with different dictionaries. (column 8, line 62 to column 9, line 14) The method comprises:

-- generating for each dictionary a set of code words based on the frequency with which character strings represented by the code words are found within the type of data, wherein character strings which are relatively more common within the type of data are represented by relatively shorter code words in the set of code words; (column 1, lines 39-46; column 2, lines 23-54; column 9, lines 39-54; Each data of a language and subject is associated with a dictionary. Shorter token is assigned to a word of high frequency.)

-- initially performing a statistical analysis of character strings found in the type of data to determine a frequency of occurrence of each of the character strings; (To establish a dictionary based on frequency requires performing a statistical analysis of character strings in that type of data.)

-- wherein one of the techniques comprises identifying strings in the first or second fields based on a location of the strings in a spell-check dictionary; (column 8, line 61 to column 9, line 54; column 11, lines 6-18; Figs. 8-9; step 210 of Fig. 8; A dictionary of common English words is a spell check dictionary. The numbers (or tokens) are the locations.)

-- generating a code word table containing a first code word table portion and a second code word table portion, the first code word table portion comprising the first code words and the second code word table portion comprising the second code words; (column 1, lines 39-46; column 2, lines 23-54; column 9, lines 39-54; Each data of a language and subject is associated with a dictionary. A dictionary is a code word table.)

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-- transmitting the code word table to the data processing device. (column 15, lines 38-68)

It is desirable to compress efficiently a text message. It is known in the art that Unger's dictionary can achieve a high degree of compression for each specific dictionary associated with a special language or subject. It would have been obvious to one of ordinary skill in the art, at the time of the invention, to replace Carr's dictionaries with dictionaries developed with Unger's teaching for each of the header data and user data because this replacement improves compression efficiency. The overall combination thus teaches:

-- for Claim 55, generating a first set of code words based on a frequency with which character strings represented by said code words are found within a header portion of the email message;

-- for Claim 56, generating a second set of code words based on a frequency with which character strings represented by said code words are found within the message body portion of the email message;

-- for Claim 57,

- encoding character strings in said header portion using the first code words; and
- encoding character strings in said message-body portion using the second code words,
- whereby to generate a compressed email message; and
- transmitting said compressed email message to the wireless data processing device.

-- for Claim 58,

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- generating a code word table containing a first code word table portion and a second code word table portion, the first code word table portion comprising the first code words and the second code word table portion comprising the second code words; and
- transmitting the code word table to the wireless data processing device.
- for Claim 61, further comprising:
 - generating a set of code words, each code word corresponding to a specified field of the address book message and being generated based on a frequency with which a character string represented by said code word is found within the specified field of the address book message; and
 - transmitting the set of code words to the wireless data processing device.
- for Claim 62, further comprising encoding character strings in each specified field using a respective code word of the set.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wenpeng Chen whose telephone number is 571-272-7431. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 571-272-7453. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular

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communications and 571-273-8300 for After Final communications. TC 2600's customer service number is 571-272-2600.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

/Wenpeng Chen/
Primary Examiner, Art Unit 2624

December 17, 2009